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My Home in the Suburbs: A Look at Urban Sprawl in the U.S.

Senior Honors Thesis Department of Environmental Studies Sweet Briar College

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Shifting Landscapes of Home

To someone who has never been there, the desert might seem like a dead place. To those who are used to the dizzying richness of some hues of green, the desert is a dull, peasant brown. When they have not seen the desert for themselves, people think only of sand dunes or cactus. They never think of the creosote bush with its thin, crooked, spindle-like branches and its tiny, rich yellow blooms. They might think of the one-inch bark scorpion or the desert tarantula; would they imagine the ghost-faced bat, the broad-tailed hummingbird, or the big horn sheep? So much life where some might assume there is none. Beauty in a land some call dead. Arizona was home to me.

Home changed the summer I applied to a private four-year college in Amherst County, in Central Virginia. August found me curbside at Phoenix Sky Harbor International Airport.

Impatient travelers darted in and out like coral fish as I made a slow advance into the massive transportation fort. Tentative in a terminal I had never seen before, I meticulously read every official sign I found to get to the security checkpoint. I was dazed by sporadic human swells by the time I reached the departure gate. Inexperience made me smile at whoever I managed to make eye-contact with while I found my window seat. Staring out the window, I stopped paying attention to the people. I drifted away. Emergency procedure protocols came and went. I made failed attempts to entertain myself with music and a book, and even watched the cheesy in-flight movie airlines always show in an effort to make passengers forget the misery of being strapped into rigid seats.

There was a plane transfer in Pittsburgh, Pennsylvania, and the new terminal was calm only because the new plane I was boarding only held 37 passengers. The seats were tinier and belong in the 1980s. I stared out the window again until the Turboprop engines started up. The

maddening vibrations continued through images of falling plane pieces and permeated my bones like an aftershock even after the plane landed. The door opened and all the passengers lethargically rose from their seats and shuffled towards it. My senses were numb from poor stimulation until I lifted my head. The luxurious landscape boasted life in every centimeter; my eyes fired off torrents of stimuli into an unsuspecting brain, sending it into shock at having to process such an immense, intoxicating green. The dizziness subsided momentarily when I stepped inside the terminal. I waited forty-five minutes for a taxi.

I did not know how far the college was. I only knew that it promise to give me 3200 acres of land with 18 miles of hiking trails. Optimism flushed through my system as I entered the taxi. I was not sure what to expect, and green murals flaunted themselves like peacocks throughout the ride. Creative writing and environmental science programs with strong overall academics lured me to this college, but the hook was that I could reach a trailhead with a five-minute walk, versus my regular thirty-minute drive back home. The dizziness wore off when I read the highway sign with the college's name on it. The old brick masonry and black, iron-wrought entrance gates enthralled me. The encore followed. The winding road snaked through a lush forest that threw me into a reverent awe. I gazed up at the army of sixty-plus foot giants as they engulfed the taxi and found that they opened up to a brick campus, the kind I had only seen in movies.

The next morning, the sun gently hummed its way into the room and slowly urged me out of jet-lag. My roommate still slumbered. I quietly tiptoed out as the floors let out the soft complaints of aged wood. I chose to wander into an inviting meadow of fat, thigh-high grass.

Testing the ground for familiarity, I waded into the thick of it and grinned when I looked down.

My baggy khakis were eagerly soaking in the morning dew that agglomerated on the grass as if

they had done so a million times before and knew the routine. By late afternoon humidity took a stronghold, and I found myself swimming in a veil of moisture that irked my skin as I roamed through the unfamiliar landscape. The trails were overrun by fallen twigs and branches, and my line of sight was almost always obstructed by forest vegetation. The view from the highest vantage point revealed only a small scattered collection of campus buildings and a sea of green forested hills. Small streams lazily ran through this rural landscape that would be my new home for the next three years.

It was an enormous contrast to the hiking I was accustomed to back home in Phoenix. The view in Phoenix rarely held a natural landscape, while in Amherst County it was the norm. In Amherst County I never ran the risk of wandering through a suburb in search of another trailhead, only to realize that there was not one. Homes advanced slowly into my small piece of Phoenix desert, waiting to spill over an undistinguished boundary I hoped was strong enough to hold. I wondered why these suburban homes were able to creep in. Why was suburban sprawl rampant in Phoenix? Why did it not practically existent in Amherst County and would it ever change?

The first thing I noticed about suburban sprawl was that not only was it everywhere, it also took up a lot of space. But what is it, exactly? Suburban sprawl is the unplanned, uncontrolled dispersion of suburban development into the area at the edge of a central core (which includes towns and cities). A suburban area can be comprised of subdivisions, shopping centers, hotels, resorts, roads, or any other kind of low-density construction. It is difficult to find numbers that accurately describe the density of suburban development and compare it to the higher density of a central core. It is like having a big cardboard box with a couple bars of gold placed in the middle, and then filling in the rest of the space with packing peanuts.

Suburban sprawl and packing peanuts both have lasting environmental effects. While Styrofoam packing peanuts are simply not biodegradable, suburban sprawl has environmental impacts that are much more complex. These involve changes in the way land is used, how the water cycle works, the way habitat is shaped, and where pollution is concentrated. Before sprawl ringed cities, farmland, forests, and other natural open areas dominated the landscape. Due to the prime location of these lands adjacent to cities, which offer a rich bounty of jobs and other amenities and services, they are the most vulnerable to suburban conversion.

How does suburban development alter the way the water cycle works? The water cycle is the continuous process in which water moves through the world. It involves water vapor condensing in the atmosphere to form clouds, and once clouds can no longer hold moisture it rains (or snows, etc). When rain hits the earth's surface, it either seeps through the ground, or if it rains too fast to seep in into the ground, runs off into the nearest water body, whether it is a lake, river, or stream.² Urbanization causes an increase in flood frequency and size. Why? Nearly 80% of all urban areas are covered by surfaces like concrete and asphalt, which are impermeable to water.³ Ground water levels also decline as a result, which reduces the flow of streams during dry periods because there is less water to feed them. Low water levels stress aquatic ecosystems and make it difficult for insects and fish to establish themselves in stretches of streams and that are affected.⁴

Suburban runoff picks up fertilizers and pesticides from lawns, sediment from barren construction sites, and oil from roads and parking lots. This has become America's number one water pollution problem, impairing 40% of the nation's rivers, lakes and estuaries.³ While chemicals poison the environment and sediment makes water cloudy, a process known as eutrophication is linked to fertilizer runoff. Fertilizers in lakes and streams then behave as a

plant steroid, and trigger a major boom in algal growth. When algae die off, the bacteria that break them down use up vast quantities of the oxygen naturally dissolved in water. Aquatic species like fish can literally suffocate to death under this condition.

Urbanization fragments habitat into "islands" that are separated by vast areas of development. Species' natural patterns of foraging over a wide range are interrupted when they move across paved roads, and these crossings can sometimes be lethal. While some adaptable species with high reproduction rates, like opossums and raccoons, can cope with this environmental stress, others such as the endangered Florida Key deer are threatened with extinction.⁵ On the larger ecosystem level, sensitive species are lost and only species that can survive under these altered conditions are left behind, which negatively impacts a system's health and stability.³

Suburban sprawl also causes other issues, such as racial segregation and unequal access to public services, but that is not what captured my attention. The part of urbanization that did draw my attention to sprawl was the conversion of landscapes. The conversion of farmland to urban areas, for instance, happens at a rate of 50 acres an hour in the U.S.⁶ It affects people as much as the environment because the landscapes lost are considered by many people to be intrinsically valuable, and in essence, priceless. When you lose places like a forest, you lose something much more than trees. You lose the ability to feel a sense of wonder that the natural landscape gives all of us. It is the kind of wonder that no city or suburb can ever provide. Otherwise, places like Yellowstone, Yosemite, and the Grand Canyon would not exist. I do not believe that people should be deprived of these places and should have to drive for days just to get to get to them. I believe people should be able to seek the wonder of the natural world closer to home. Once places like these are developed into suburbia, there is no turning back. When

was the last time sidewalks were torn up, homes removed from their foundations, and the landscape returned to what it once was? Suburbia changes the landscape forever. Places of development that are no longer used are simply abandoned, left to time.

Some of our social and economic values are drivers for sprawl. Our capitalist system is set up so that our society is dependent on growth as a positive sign of progress. The American Dream, 2.4 children and a home in the suburbs, is the ideal to which most of the individuals in the U.S. strive for. The idea of your very own home is further fueled by our society's strong belief in individualism, for which the individual comes first, and community concerns follow after. The federal government has also played a role in shaping the suburbs. Throughout history it has passed policies and created subsidies that promote rapid growth, which in turn has caused the explosion of suburban sprawl. At the same time, it is the government's duty to protect us from ourselves, moderate our behavior, and plan for our collective future. With the U.S. population currently around 298,663,079 million, it important to consider what the American Dream would do to the landscape.

Knowing what sprawl is visually and in terms of density, and knowing its detrimental effects to the landscape only takes me so far. It does not tell me what causes sprawl or how it even began. I agree with the old adage that in order to understand something, one must look at its history. How did it begin and why? Did it continue because people value suburbs more than they do natural landscapes? Will it continue into the future?

A Brief Historical Look at Sprawl in the U.S.

It was the era of Manifest Destiny: the idea that pioneering families would settle all the land from coast to coast. In 1862, during the midst of the Civil War, the government threw its weight into this idea by passing the Homestead Act. The act was a form of land grant that gave

160 acres of land to anyone willing to build a home and stay put for five years. The coast of the continent had already been settled, and thousands of families took their belongings and packed them up into horse- or ox-drawn Conestoga wagons and blazed new roads into the middle of the country in search for a better future. During those years, there was plenty of land to go around. Out of the 1.9 billion acres of land in the contiguous United States, 277 million acres were granted to homesteaders. 11

In 1869 the first coast to coast railroad route was established.¹² Trains came to dominate transportation for the rest of the nineteenth century but it was not the only aspect of American life that was changing. After the end of the Civil War, the U.S. caught up with the Industrial Revolution that had started in European cities. Mechanization of manual labor processes gave birth to assembly-line production and coal-burning factories that churned out manufactured goods. The combined revolution of transportation and industry caused an increase in city populations. Trains gave Americans the freedom to move around from place to place with greater ease and speed, while the rise of industry provided the incentives of factory jobs to lure rural people to the cities. Native born Americans were not the only people moving into cities. By the turn of the century, there were 10.3 million immigrants in the United States.¹³ An increase in city population increased the demand for manufactured goods, which led to an increase in industrial production.

During the nineteenth century, businesses were small and privately owned. The Industrial Revolution influenced an increase in company size, and company ownership became public via Wall Street stockholders. The U.S. government responded to these corporate changes by creating the Federal Reserve System in 1914 in order to stabilize American banking. This stabilized the banking system, and when combined with corporation changes, gave the real estate

industry the opportunity to build bigger development projects. Before this shift, the size of a construction project was restricted by the amount of money that a bank, mortgage lender, or small group of partners, could pool together. Once Wall Street corporations took hold, the amount of money that could go towards a construction project skyrocketed and larger-scale developments began to arise.¹¹

By the early twentieth century automobiles began to appear on the personal transportation scene. In 1902, Oldsmobile became the first company to mass-produce automobiles. By 1905, automobiles were being produced at a price that was affordable for everyone. Ford's Model T was introduced in 1908 and became a major success. Farmers in particular were big fans of this model because it was designed with a high clearance, which was excellent for traveling over deep ruts and muddy terrain, the kind of roads typically found in the countryside. Though automakers did attempt to lobby Congress for federally funded roads during the first decade of the 20th century, they were unsuccessful.

The influx of people into cities increased pressure on the road and transportation networks of the day. While the train remained the norm for long-distance travel, intracity travel was dominated by pedestrians, stage coaches, and electric street cars. The materials used for paving city streets were often gravel or cobblestones, and they were generally dirty, rough, noisy, uneven, damaging to vehicles, and uncomfortable for riders. The public soon began to push to improvement of city streets and the federally funded rural roads program appeared in 1916. In the early 1920s Thomas McDonald was chief of the Bureau of Public Roads and had a vision for a national highway system. He proposed a bill that became the Federal Aid Highway Act of 1921 that provided states an average of \$75 million per year during the Roaring Twenties. This act

set the precedent of major federal funding of roads, a notion that would come to full culmination in the late 1950s.

The post World War I era saw a significant boost in consumerism. As author William Kaszynski states, "Prohibition and the stock market craze contributed to a new 'live for the moment' attitude, one of self-indulgence not seen in the nation's previous history of pioneer sacrifice." This decade of glory came to an eye-opening halt on October 24, 1929. The United States stock market crashed in a most spectacular way, launching what was later called the Great Depression. Prices and employment rates fell, and construction came to a standstill. Within a year, a great environmental cataclysm added to the human misery: the Dust Bowl. The term "Dirty Thirties" was coined to describe the phenomenon of the immense clouds of wind-driven topsoil that swept across the central United States during that decade. Thousands of families moved away from their ruined farms in the Plains states into the far West to look for good jobs promised by California growers. In this exodus out of the former frontier, Ford's Model T replaced the covered wagon. 15

In 1932, the automotive industry took action against its urban competition: street cars and trolleys. The private owners of city streetcar and trolley lines were at times unwise in handling expenses and would often go bankrupt or be forced to sell. Automobile companies took advantage of this and began to take street cars off the roads by buying up these bankrupt companies and tearing out rail lines. This maneuvering enabled them to corner the transportation market and pushed Americans in cities to rely on the automobile to get around. This back-door method of taking over and getting rid of the mass transit industry was not caught by the federal government until 1947, and though the automotive companies involved were indicted and convicted in 1949, it was far too late to save rail lines as a form of intracity transportation.¹¹

This era of hard times for Americans in the 1930s elicited a response from the federal government under the auspices of the New Deal years that is almost unequaled to this day. In terms of neighborhood development, the government forever changed the way homes could be purchased. During the 1920s, homeowner mortgages were designed to only pay off monthly interest and not what was actually owed on a loan; the full amount of the loan was due when the term was up. Now, in the wake of massive foreclosures on homes, the government restructured the mortgage system so that homeowners were able to pay off their debt bit by bit over a longer span of years. The federal government also created a system that ensured that there would always be money in the market for new housing (the Federal National Mortgage Association, known as Fannie Mae) and began implementing subsidies for neighborhood water and sewer lines. This policy shift set the stage for growth outside city boundaries and laid the groundwork for suburbia.

In 1939, the Second World War broke out in Europe. The U.S. did not officially join the war effort until 1941, but it spent the previous year in preparation. New war-time factories sprang up on the outskirts of cities, not because room was scarce within city boundaries or because appropriate infrastructure did not exist, but to prevent the destruction of vital parts of the country should an enemy attack occur. In order to make it easier for workers to reach their jobs, the government built housing and roads for them near the factories.¹¹

The piece of federal war-time legislation that contributed most to the full-fledged commencement of suburban growth was the GI Bill, which was created under the department of Veteran Affairs (VA). Though it was enacted in 1944, its full force was not in effect until the war ended and the 12 million soldiers that had been overseas returned. This bill provided assistance with college tuition, job training, and best of all, a new loan program that provided

mortgages which were cheaper than paying rent.¹⁷ The Federal Housing Administration (FHA) also helped finance military housing and directed its loan program at single-family suburban construction.¹⁶ Returning soldiers quickly took advantage of this legislation, married their sweethearts, bought a flood of single-family homes, and spawned the baby boom. Whether or not it was intentional, the VA and FHA programs also discouraged the renovation of existing homes, the construction of row houses, and mixed-used buildings. Developers rushed to meet the demand of so many returning soldiers. The most influential of these postwar developers was Alfred Levitt, who made assembly-line home construction a reality and built a suburb in the Long Island area that eventually came to be known as Levittown. This rush to build and Levitt's new construction methods initiated the abrupt rise of "cookie-cutter" homes, a template created by war worker housing models and the factory line production of war products.¹⁷

Most of the immediate post-war development was concentrated in the areas just outside of major cities for three prime reasons: availability, affordability, and accessibility. In order to provide housing on the scale that was being demanded, developers needed massive tracts of cheap land. The land also had to be located close enough to access a city's vital resources and commodities (jobs, home furnishings, food, etc.). This was the time in history during which owning an automobile became essential for comfortable living. The railroad days had fizzled during the Great Depression, and though trains were greatly utilized during World War II, travelers opted more and more to use the automobile to get around. While trains were still used to transport freight cargo, this trend left passenger railroads on the brink of disappearing until 1950, when Amtrak was established by Congress in order to save what was left of passenger service.¹¹

In the postwar era, cities themselves began to experience decay as a result suburban growth. Some people moved because buying a home in the suburbs was cheaper than renting a city apartment. Others were attracted to the calm and quiet lifestyle suburbs offered. In 1949, the federal government tried to aid those who could not afford to move. A national housing policy was enacted that gave cities funding incentives to fix up run-down areas. All cities had to do was clear off these areas and sell them to developers. In the drive to maximize profits, developers would often build homes for mid- to high-income families, leaving the urban poor with few housing options after being removed from the very areas that cities chose for redevelopment. The overall goal of the policy had been to provide all Americans with decent housing, but it unwittingly led to subsidies that were most useful to the middleclass. 11 By the early 1950s, nearly all the pieces needed to cause suburban sprawl were in place: population flight from cities and rural areas to suburbs, a booming real estate industry creating thousands of cookie-cutter homes, America's love affair with the automobile, and financial incentives provided by federal programs.

The only missing piece was large-scale construction of roads. Congress filled this gap in 1956 with the National Interstate and Defense Highway System Act. It had one main purpose: to create better roads between cities, supposedly to facilitate the movement of troops during wartime. The automobile industry lobbied for this act and helped secure the construction of 41,000 miles of new high-speed, limited-access highways, 90% of which were federally funded. This plan for a highway has its origins in Hitler's construction of autobahnen in Germany as a faster, more efficient way to mobilize troops. 18 Although the National Interstate and Defense Highway System Act was intended to produce roads between cities, it also constructed roads within city boundaries. This further facilitating the flight into suburbia by making it faster to get

in and out of the city. 16 Overall, suburban sprawl was created by the combination of the American Dream and the federal legislation that was enacted during the middle of the century. These policies are what provided the incentive to grow, but they did not include a plan for the future.

Some Tools for Managing Sprawl

Sprawl has continued to increase since the 1950s, with over 93% of growth located in the suburbs between the years 2000 and 2004. 19 The increasing awareness of the negative effects of sprawl has led to a search for ways to contain it, and currently there are three tools that can be used to manage urban sprawl. The first and most traditional is zoning. Zoning is used by cities and towns for various reasons, including promoting orderly growth and protecting existing landowners by ensuring a convenient, attractive, and functional community.²⁰ It is a tool for land-use regulation and specifies which pieces of land can be used for residences, businesses, industrial production, and recreational activities, to name a few. Modern zoning laws restrict and segregate each of these land-use types, and can also be used to regulate population density of an area or the dimensions of buildings that can be constructed in each respective zone. Though zoning has only been implemented as a set of laws in the U.S. for the past fifty years, the concept has its roots in Europe's centuries of intense coal burning centuries. Coal burning in homes and cottage industries had produced severe air pollution and by the 17th century, the smoke was so thick that John Evelyn wrote to England's King Charles II in 1661 saying, "A presumptuous smoake did so invade the court that all the Rooms, Galleries and Places about were filled and infested with it; and that to such a degree as Men could hardly discern one another for the clowd..." He proposed that all the smoke-producing businesses be moved out of London by an act of Parliament.²¹ The King did not heed this advice, and this pattern continued into the

following centuries, with Industrial Revolution factories allowed amongst residences producing a confounding checkerboard effect. City dweller's health and quality of life were seriously impaired until smoke-producing factories were removed and segregated from residential areas. Single-use zoning as a concept was finally implemented by the end of the nineteenth century. After this, city dwellers had some respite from were no longer choking on the prolific smoke and fumes produced by factories.¹⁶

The initial success of this concept also convinced planners that zoning was the most effective way to manage a city. Land use segregation, which was initially only applied to incompatible uses, became the standard widely applied in Europe. In the U.S. the implementation of zoning districts came into being in 1926 as a result of the U.S. Supreme Court *Village of Euclid v. Ambler Realty* case. After World War II, city planning evolved into a "rational model that could be easily understood through system analysis and flow charts" instead of a random approach based on history. ¹⁶ Zoning is currently the most common method used by planners across the nation to manage sprawl, and it implements the goals of the General or Comprehensive Plan that most established locations use to detail how growth is managed and plans out neighborhoods, open space, transportation, economic vitality and other aspects that make up a locality.

One particular form of zoning that has been implemented in some areas and is considered a success in controlling sprawl is called an Urban Growth Boundary (UGB). A UGB is a mapped line around a city within which development is allowed, while the land that falls outside of the boundary is left relatively undeveloped. The main goal of an UGB is to limit development to a certain region by increasing density (where development may or may not already exist) while protecting and preserving open spaces and farmland outside of the boundary. Some of the

infill within the boundaries is zoned for mixed use, meaning, for instance, that residences can be next to or even in the same building as businesses. Combine mixed-use zoning with a pedestrian friendly layout as well as mass transit and you have got a very livable city.

The UGB made its first major appearance in Oregon in 1979, when it was approved by voters who were concerned about the major loss of farmland that was happening on the outskirts of its cities. These voters willingly gave up the some of the economic benefits of sprawl in order to help protect their surrounding landscape. Portland, Oregon is the most well-known example of a UGB because despite the land development restrictions, it has created a vibrant downtown economy with a hip urban atmosphere.²² The weakness of Portland's UGB is that it can be expanded to make room for more development. Since it was adopted, the UGB has been moved about three dozen times, with most of the extensions being less than twenty acres in size. Since 1998, however, 25,459 acres have been added.²³ Aggravating the problem is the lack of support from surrounding communities and municipalities. They allow development without having to obey the restrictions of a boundary. UGB can only be effective if applied at a regional level, but planning is still currently focused at the single municipality level.²⁴

A second tool, conservation easement, implemented by individual land owners rather than city planners, is the only permanent solution for sprawl prevention. A conservation easement is a voluntary agreement between a land owner and a conservation group (land trust) that puts a permanent deed restriction on the current and all future owners' ability to develop the land. The owner still maintains use and control of all other aspects of the land. For example, an owner could choose to ban logging in their forest or forbid breaking a parcel into smaller pieces for individual homes. Many state governments offers tax breaks as an incentive for putting land under easement, but this mainly benefits those with large incomes. Another barrier

is that some land trusts charge an upfront fee, which is sometimes unaffordable to those seeking to put their land under easement. Small tracts of land are often not eligible for conservation easements, which leaves a great deal of acreage unprotected.²⁶ So while easements offer a sense of permanence that UGBs do not, they provide protection from development only little by little.

Zoning remains the traditional form of land-use planning and cities, such and Portland or Phoenix, incorporate zoning as part of their visions of the future. I do not know what it is like to walk the open spaces of a city like Portland, but would one day like to see the UGB at work for myself, and get to know the community that was progressive enough to manage suburban sprawl before it became as unmanageable as it did in Phoenix.

Hiking the Phoenix Landscape: The Big Picture

While in Phoenix, I lived in your run of the mill subdivision. I was unaware of the fact that I lived in a subdivision until one day a friend dropped me off at home and nonchalantly stated, "Ah, the suburbs." I looked at him out of the corner of my eye with contempt, because I had always assumed that the suburbs were always somewhere else and was slightly in denial of the truth that had just been revealed to me. I quickly realized he was right, and accepted it.

I spent countless hours hiking the desert landscape in part of the Phoenix Mountain

Preserves. The hill ridges I wandered around were severely eroded by water in most places, and were made of a faded deep brown rock. I was once surprised by a male hummingbird that kept whizzing passed my head as he tried to defend his territory from my invasion. From the southwest side of the ridges I could glimpse the vast expanse of Phoenix and how it completely filled the Salt River Valley it lay in. It was a valley engulfed by sprawl. The central heart of the city was designated by about a dozen office buildings, but everything else seemed to be a one-story mass of smaller businesses and homes. This artificial landscape is where I was finally able

to see sprawl's big picture, but it would not be until years later that I learned the name of what I saw.

The name of the preserve that I hiked in is Dreamy Draw Park. The name comes from mercury mines that were located in the area and the side effects of intense mercury exposure, include blurry vision, experienced by miners. The first small mine opened in 1916, and mining in the area continued until shortly after World War II.²⁷ The remnants of the mines are gone now, covered over with roads and buildings while the leftover land has been placed in a preserve. On a road map, Dreamy Draw is a strange green polygon in the northern portion of the city of Phoenix. It is dwarfed by the magnitude of the scrawled road patterns that surround it. Suburbs have spread out slowly but in time have covered impressive spans on the outskirts of the city.

This preserve is one of the few outdoor refuges available for those in the Phoenix area, but it is my favorite part of the preserve because there are few people on the trails at any given time. The trails are easy but still satisfy my hunger for open space as I wander through mountain passed where saguaro cactus tower sixty to eighty feet above me. From most parts of the park, I can hear the hum of cars in the distance and am always aware that I am surrounded by suburbia.

If you look at the numbers you will find that 1.4 million people live in Phoenix.²⁸ 1.4 million is an amazing figure, considering how lifeless some people might consider the desert. With so many people there, you would think Phoenix was full of desert lovers, but I think they live there because, as Marc Reisner puts it, Phoenix is,

a make-believe city with exotic palms and golf-course lawns and a five-hundred-foot fountain and an artificial surf. Most people "love" the desert by driving through it in airconditioned cars, "experiencing" its grandeur. That may be some kind of experience, but it's living in a fool's paradise.²⁹

There was a time, however, in 1848 when (the land was acquired from Mexico after the Mexican War) no one wanted to be anywhere near this place. John Wesley Powell, a one-armed retired

Civil War major, would not explore the monolithic rapids of the then untamable Colorado until 1869.³⁰ John William Swilling would not notice the irrigation system ruins of the Hohokam until 1887 (the Hohokam were a mysterious Indian civilization that vanished without leaving any clues as to why). Swilling was the first to realize the potential for modern civilization and life in the Salt River Valley. He was the one who rallied funds to start a canal construction company and went into the Valley (as locals now refer to it) to resurrect the Hohokam irrigation system. His photograph circa 1870 looks all the part of a wild west cowboy—long coat and weather beaten hat, wavy shoulder-length hair parted on the left side of his skull, and a thick mustache, which if he grew a bit longer would look like walrus whiskers.³¹

The population of Phoenix around the time of Swilling's photograph was 235, with 1,500 acres in cultivated land.²⁸ The name of the town, Phoenix, represented life rising anew from the remains of the past. The original town site was established in October of 1870 and was only half a square mile. This was located at the geographic center of the Salt River Valley, so named for the Salt River that ran one mile north of the town. Now the city is 475 square miles.²⁸ Even at that size, it is relatively easy to get around because the streets are in a grid design, like a waffle, and you can drive for forty minutes or more in a straight line without ever leaving the streets of Phoenix. William A. Hancock set the town plan, which included this grid pattern because it was "practical and profitable." There were also individuals who wanted the new town site to grow, known as boosters. The first thing the boosters did was build more canals to bring in more and more water into the Valley for irrigation.³¹ I have probably driven by at least one of these canals, but never really thought about what an anomaly they represent: water flowing crisp and clear year-round in a place that only gets an average of 7.5 inches of rain a year.³² It is the kind of rainfall that produces cactus and creosote bush.

In 1877, the federal government came up with a special version of the Homestead Act for this region: the Desert Land Act. This piece of legislation increased the amount of land grants from 160 acres to 640 acres, or one square mile. Most of this land was used for agriculture and produced citrus orchards and cotton fields. I can still see the remnants of these scatter about the city in small forgotten plots. The people who did live in the town, regardless of whether they were farmers or just townspeople, liked anything that made their home attractive to newcomers and businesses. Official recognition of Phoenix was important because of the growth opportunities such authenticity would lend it. The governor signed the Phoenix Charter Bill in 1881, essentially turning Phoenix into an official locality.³³

John T. Alsap, a seemingly small man with stern eyes, a graying beard, and a right ear that stuck out a little at the top, was the first mayor of Phoenix and one of its more influential characters. He was a strong booster and suggested the implementation of taxes to the town council in order to deal with the pressing public issues, like to dispose of trash. Of course, once there was an established government, citizens were willing to complain. One of the things they complained about was dusty roads during the summer. If dust was their concern, then there was little that horse-drawn water-sprinkling carts could have done against the stealthy ability desert dust has to get all over everything. Even now, when asphalt is the ruler of roads, dust accumulates inside my house such that, within about three days after cleaning I can leave messages in the dust that settles on the television.

What citizens were not complaining about was the canals or the fact that the Valley became known as "the most fertile and productive in the territory" in the 1880s. The Swilling legacy had evolved into the Arizona Canal by 1885. The Arizona Canal was bigger, deeper, and longer than previous canals and ran through areas that did not have old Hohokam canal ruins. It

was the first project that required outside investment. The 80,000 acres of cultivation it opened up have now grown into suburbs.³³

Railroads are what facilitated the arrival of newcomers and businesses and were the key to a successful town in the nineteenth century. The Southern Pacific Railroad made its way into Arizona and near Phoenix in the 1870s. Trains still run through the heart of Phoenix along the old main street called Grand Avenue and can hold up traffic for up to twenty minutes, making some drivers so fed up that in the middle of the standstill they jerk their steering wheels to the side and make awkward maneuvers to turn around. Two men, M.E. Collins and Moses H. Sherman, owned the Phoenix Street Railway Company (SRC) and expanded development past, what was in 1887, the eastern and western sides of Phoenix. Some of the financial backing for the expansion of the Phoenix SRC came from real estate developers (friends of Collins and Sherman) who owned land near the new horse-drawn rail lines. It was a win-win situation for both real estate and railway developers, and it helped boost the city's growth. Just as today's cities growth patterns are influenced by the automobile, the streetcar influenced the growth pattern of the 1890s.³³

The boosters seemed driven to ensure that Phoenix never fell behind the times, by promoting modern construction practices, the latest fashion, and the latest modern trend. In order to establish it as a "vital player" in the Southwest, boosters decided to go after a title they felt would make Phoenix more prestigious. They wanted Phoenix to become capital of the state, but there was one problem. Prescott, a smaller mountain town to the northwest of Phoenix already held that honor. Of course, there was a squabble, with Prescott arguing that Phoenix already had plenty, if not too much, and refused to let it go. Prescott was the little man in this one, however, because Phoenix had better restaurants, hotels, and amenities of that nature, which

was more attractive to legislators. Phoenix won the fight in 1889 and legislators came to the new capital in trains instead of stagecoaches, the trip paid for by Phoenix citizens.³³

Boosters did not stop there. They felt that Phoenix was not good enough with just one railroad line to serve its needs. The completion of the Santa Fe, Prescott and Phoenix Railroad in 1895 was a celebrated event, but the line left them disappointed when the hoped for boom in population did not happen. Years of successful cultivation came to an end in the latter part of the decade when a drought hit, shocking farmers and some city dwellers into moving away from the Valley. Those who remained knew that without a way to fix their unreliable water supply, the city would never attain the prosperity they wanted. They needed a way to keep a steady water supply, and four canals would not be enough. A water storage system would work better, but locals had never been able to afford it. The best way to get a storage system built was through lobbying the federal government to cover the costs.³³

Benjamin A. Fowler was the most influential leader in the effort for federal funding and spent a great deal of time lobbying in Washington. In 1902, the Newlands Act passed at the federal level, with the help of one of Fowler's friends, President Theodore Roosevelt. The Newlands Act is actually better known as the Reclamation Act and allowed for the construction of a dam that cost \$3.8 million. It was one of the largest dams in the world at the time and created one of the world's largest lakes a mere 62 miles from Phoenix. The name given to the dam at the dedication on March 18, 1911, was Roosevelt Dam.³³

The idea that a stable water supply would bring more development to Phoenix proved true. By 1910 there were about 11,134 people living there. Growth was the norm for Phoenix, and few of its residents seemed opposed. The local paper even had a statement in it that read, "...there is no stand still... It must be either grow or dry rot." Growth was a serious matter in the

capital. The desire to keep up with the latest modern trend spurred growth even further when the automobile came to town in 1908. The automobile did the same thing in Phoenix that it did all across the nation: it increased mobility and sparked an exodus from cities into suburbs. The demand for better roads increased because there were more automobile users. Nineteen blocks worth of street in the business heart of Phoenix went under pavement in 1912, and the rest of the city eventually followed over the years. By 1929, there was one car for every three people in the Phoenix area. The first decent and dependable airport, Sky Harbor, also appeared in this decade.³³

The Roaring Twenties saw the first major non-agricultural expansion in Phoenix.

Buildings and homes went up more quickly than in any previous decade. Initially, the amount of revenue the city made from issuing building permits was only \$1.7 million, but by the end of the decade it had gone up to \$5.7 million. The most desirable residential areas were the Las Palmas, Central, Los Olivos, Kenilworth, Palmeroft, Encanto, and Broadmoor additions. I wonder if the Los Olivos residential area is the same as the Los Olivos that I have driven by on several occasions, the sea-foam green letters on the sign faded by the desert sun.

The increase in transportation methods meant people could more easily access Phoenix, and the downtown area grew in response. It seemed to have started more intense competition between luxury hotels, one of which was Hotel Adams. A photograph of Hotel Adams from 1925, with men and women on a double-decker bus wearing white clothing that made them seem like ghosts, triggered a flashback in my mind, not because of the people in it but because of the type-set of the hotel's letters. The first job I ever had was in a building about half a block to the west of the hotel on the opposite side of the street, and the letters had not changed through all those years.

Hotel Adams was built to lodge wealthy tourists. The idea of tourism as a business that could generate profit for the city had not taken a strong hold in the mind of Valley boosters until the 1920s. They had previously focused on attracting health seekers. A local writer Goldie Weisberg called the health seekers, "just remittance men living in sanitariums." As the tourism business grew, this image changed to one of "elderly men who liked to play golf all year round." The same amenities that drew politicians to Phoenix when it became the capital drew the influx of tourists. Boosters also waged a massive ad campaign at the national level in major magazines, such as the Times, Atlantic Monthly, National Geographic, Vogue, and Better Homes and Gardens. By 1929, tourism made Phoenix \$10 million wealthier.³³

The good times ended in 1929 after the stock market crashed, when Phoenix, like the rest of the country, plunged into the Great Depression. The New Deal helped Phoenix in much the same way it helped the rest of the nation. It provided thousands of federal jobs, supported locally produced goods, and sponsored projects that improved parks, schools, streets, hospitals, airports, and government buildings. Federally funded construction was so common that one Valley contractor claimed construction was "no longer a private enterprise." New Deal legislation helped improve existing dams and build new ones, as well as extend water services and rebuild municipal pipelines. These federal subsidies fueled sprawl in Phoenix and reflect the development pattern that occurred in the rest of the nation.

World War II and the legislation related to it affected Phoenix much as it did the rest of the nation. Vast military installations were created, and businesses like Motorola flocked to Phoenix because of the wonderful climate. By the post-war era, residents were firmly attached to their automobiles and preferred them for traveling around. The city became immense after heavy land annexation in the fifties and sixties. By 1977, about 10,000 acres a year were

changing from agricultural to urban use. That is approximately 15.5 square miles per year. The amount of land under cultivation in 1915 was 390 square miles, while the current size of Phoenix is at 475 square miles. Growth happened so quickly that it was virtually uncontrolled.

In the early 1980s Phoenix leaders first attempted to address the issue of rampant growth. They noted that land in Phoenix had been "leapfrogged." Parcels of land within the city remained undeveloped because of high land prices that drove developers to the outskirts where land was cheaper. By 1980, 40% of land within the city limits was undeveloped while suburbs on the periphery boomed. Phoenix leaders introduced the idea of "urban villages" in the late eighties. These "urban villages" were meant to act as miniature versions of downtown that would be self-sufficient in terms of providing jobs and amenities for their residents while concentrating development in their designated cores, which were shopping malls. It did not work. Residents were already used to commuting long distances for jobs, recreation, and shopping opportunities. The city was designed to work that way.

I lived this way, too before attending college in Virginia. I lived in west Phoenix and attended high school in southern Phoenix. My first job was to the east in downtown Phoenix, and I attended a few night classes at a college in central Phoenix. Dreamy Draw, my favorite hiking spot, is the farthest of all the places I normally go, a tiny piece of open land in northern Phoenix. I actually know the name of my urban village, but I did not know what it was for. For seven years as I turned into my suburb and drove past the royal purple aluminum sign with white "Welcome to Maryvale Village" with graphics of a stage and musical notes floating across it without knowing what it meant. The urban village concept is still alive, but in my eyes it has yet to achieve the main goal of providing for all its residents' needs.

So what are Phoenix city planners up to now? Their current General Plan spells it out.

The core of Phoenix's general plan comes out of 1985 version that was not updated until 1998.

New Growing Smarter Legislation requires cities to update their development plans every 10 years (and add five new components).³⁴ The goal of the plan is to "maintain a high quality of life and an economically healthy community," and it addresses all the most pressing issues of sprawl (land use, cost of development, transportation alternatives, rehabilitation, environmental planning, open space, etc).³⁵ There is nothing inherently wrong with their planning policies. So what keeps propelling sprawl in Phoenix?

Perhaps the answer lies in the community survey. The most valuable asset Phoenix has to offer, according to those who live here, is the *weather*.³⁶ When asked whether continued growth would bring more problems, over 50% of residents responded that it would. However, when asked what they most disliked about living in Phoenix, only 11% responded that sprawl was what they most disliked when compared to the other things, such as traffic and crime. So residents were aware that sprawl was not necessarily a good thing, but when it came down to what they actually valued, they chose good weather, shopping, dining, entertainment activities, and employment opportunities. The only way to meet the demand for these services is to continue developing to accommodate the population of over 1.3 million people.²⁸ Overall, though residents recognized the need for management, city officials can only respond to residents' wishes.

When it came to open space, 70% of residents considered maintain the natural landscape very important. Phoenix's residents did value the landscape, but when faced with a choice between open land and the economic benefits of sprawl, they chose sprawl. Do they really have to choose one over the other? No, but few people are aware that there are other ways to plan a

city. This is where the city of Phoenix needs to step in and educate its residents about the alternatives (such as mixed-use zoning) that would preserve open space and allow for better sprawl management. Educating residents on the alternatives would enable them to understand that they could have both at the same time. In the meantime, without a big enough public demand for sprawl managing tools the city will not spend money to build infrastructure that will be inadequately used.

Amherst: Paths for the Future

From within a magnificent three-story brick building, I stare through a window, mesmerized by the glow of impending dusk. Rose-tainted orange hues weave in and out from behind a sky of soft, lazy sheep-white clouds that billow around an opening of blinding light. Beams of light pour through, beacons to the foothills of the Blue Ridge Mountains in Central Virginia. These soft undulations of earth lie still, brushed over with tulip poplars, red oaks, white oaks, maples, beeches, and dogwoods. Beneath this vibrant canopy set afire by autumn, are nervous whitetail deer, gluttonous squirrels prepare for winter, and meandering streams. Living here is quiet, the kind of place where if you turn off your radio, you can hear birds fussing about in the trees that are only a few hundred yards from your window.

Within the landscape of Central Virginia lies Amherst County. A new bypass on Route 29, the major northeast-southwest highway, has irreversibly altered the landscape. It begins across from my college's entrance. Completed in October of 2005, it is designed to ease traffic congestion in Madison Heights, an unincorporated area to the south between the city Lynchburg and the small town of Amherst near the college.³⁷ The bypass can transport me from my college to the airport in a matter of twenty minutes, instead of forty on Route 29. There are few notable structures on the drive, except for the Jumbo Family Restaurant on the right-hand side of the

bypass when going north. Most everything else is tree-covered hills, with cattle grazing in the occasional pasture. The new bypass has the potential to change the face of Amherst County in a different way. Many local residents believe that the bypass places the county at risk for suburban sprawl-whether sprawl is beneficial or detrimental depends on residents' current views of the county.

Local planners and the Virginia Department of Transportation foresaw this possibility and designed the bypass with only three exits, in order to aim new development at areas that are already developed, such as the city of Lynchburg, Madison Heights, and the town of Amherst. The county plans to use zoning as a form of directing and containing growth. The first zoning ordinances in the county appeared in 1968 and only covered the land that was adjacent to Route 29. Countywide zoning was not established until the 1970s, only to be thrown out by a judge in 1978 after the code was challenged. The next set of zoning ordinances made its appearance in 1982, and all zoning amendments are founded on this set of ordinances. A new set of zoning rules were adopted in 1999 in order to satisfy the goals of the county's 1998 comprehensive plan.

This comprehensive plan aimed to provide enough space for its four land-use types: residential, commercial, agricultural, and industrial. The plan was traditional in the sense that it wanted to maintain single use areas segregated from each other in order to reduce conflicts that might arise. Commercial growth (restaurants, shops, gas stations) would be concentrated next to the county's major highways. At the same time, the plan aimed at keeping growth compact so that open space (agricultural and recreation areas) and areas unsuitable for intensive development were protected and preserved. There was little specificity in terms of regulations, but a recommendation that zoning and subdivision ordinances along with a zoning map be revised to help implement the goals of concentration growth and protecting open space was provided.³⁹

This comprehensive plan also identified two types of agricultural areas: general and residential. General agricultural zones fit the traditional image of farmland, while residential agricultural areas were limited to areas along state roads, with the primary purpose of providing housing areas to relatives and employees of agricultural landowners. Any development in residential agricultural areas required a buffer zone that separated them from general agricultural areas in order to reduce possible conflicts, such as complaints about the smell of manure that is applied to fields in order to fertilize them.

How does the new bypass place growth pressure on Amherst County? First, it has made the county more accessible at the regional level, to cities as close as Lynchburg, which is only about thirty minutes to southwest, and Charlottesville, which lies about an hour to the northeast. All of the outlying counties around Amherst have already experienced development, which in turn has driven land prices up everywhere except in Amherst where there is little overall development. Increased accessibility with relatively cheap land prices makes Amherst the prime target for an increase in suburban development. Those who work in distant cities like Lynchburg and Charlottesville are attracted to Amherst because of its relatively low land prices and rural environment. This makes Amherst County susceptible to becoming a bedroom community, where people live and play, but work in distant places. Another group of individuals who are attracted to the county and are moving in are retirees who want to benefit from lower land prices but enjoy their retirement in a natural setting. This influx of people, however, is slowly starting to drive land prices up here, too. 40

The town of Amherst offers an opportunity for compact growth because it is located near one of the planned exits and provides a central location in which growth can be focused. If growth was not concentrated and the town did not allow development to occur, it would scatter

into the surround rural areas. The town has prepared itself for growth by increasing the size of its water and sewer lines and has built a new business park. Will it become a bedroom community for Lynchburg and Charlottesville? It is a possibility. The town has already seen some development. A new town house development has gone up, and the town manager has admitted that "the phone does seem to ring more frequently these days than it did in years past from developers saying. 'I want to do this, or I'm looking for property to do that'." It is also important to look at a developer's perspective. Growth, whether it is compact or suburban sprawl, is beneficial to developers. A short talk with a local developer confirmed the possibility of the town being a bedroom community. When I asked about whether there was any demand for subdivisions, he replied,

"I think there is a demand for subdivisions, along the Route 29 corridor and along the Route 60 corridor." I considered this response and gauged his attitude towards sprawl with another question,

"I heard, though I thought it was a bit far-fetched, that there would possible be a corridor from Amherst to Charlottesville..."

"Of subdivisions?" he asked politely, trying to clarify my statement.

"Yes."

"Oh yes, I think that'll happen. There's no question."42

His belief that Amherst County would eventually be blighted by sprawl stunned me.

Development along the 29 corridor would follow the county's 1998 plan for growth to be concentrated along major highways, but subdivisions would not fall under the county's desire for *compact* growth.

The town manger for Amherst also provided insight into the perspective of those who have moved here from elsewhere. While they claim they want to preserve the county's rural landscape, they have complained to him,

"Listen, when I moved here five years ago and built my retirement home, this was a great thing. And now you are letting all these developers come in, and they're screwing up our community and we want it to stop."

The town manager rightly pointed out that this argument does not make sense because these same people came to the area and put in a new house and make up the market developers are building for.⁴¹ They contribute to the problem they are complaining about, but they rarely stop to consider that truth. This issue extends out across the county. People move here because they enjoy living in a rural landscape instead of an urban landscape, so later they may turn around to complain about further growth without realizing that they themselves contributed to it at one point.

Residents who have been here all their lives have mixed feelings about development. They want the amenities that development brings, but at the same time want to preserve the county's rural charm. The county can continue to attempt to funnel growth to areas where development currently exists, but it still needs to provide the services that residents want. Even though community members do not like the visual aspects of sprawl, they value the county's ability to provide jobs and amenities more. The people who have lived in Amherst their whole lives want their children to be able to stay here and have good jobs, and the only way to accomplish that is to allow development.³⁸ If jobs are created without corresponding housing development to accommodate new residents, new business employers might have to cannibalize (steal employees from) older businesses. In order to prevent that from happening, growth is allowed so people can move in.⁴⁰ This sets the county up for a cycle of perpetual growth.

Perplexed by the contradiction between people's desire to have a good life and their constant undermining of their desire to have a beautiful landscape I confided to the town manager, "I'm just trying to figure out why it is happening this way..."

He insightfully replied, "Well, everybody's got to have their acre, too. It's an American thing... You've got to have your acre otherwise you're not a legitimate citizen who's made it in the world. People just don't believe in apartments for some reason..."

"But some of them do!" I protested.

"I know they do in the city, but it's just not done here," was his short reply.

The county is currently undergoing another revision to its comprehensive plan that expands upon the 1998 plan's goal of concentrating growth along highway corridors and providing for open space. Any suggested changes will be decided upon and implemented by the Board of Supervisors. One suggested change has been in the definition of an agricultural zone to a 10 acre minimum. The old ordinance of only a minimum lot size of one acre is being revised to increase minimum lot size in order to make it more accurately reflect land-use type. Residents have voiced, "That's not an agricultural zone. How is that agriculture if you can potentially end up with one-acre lots all over the county? What kind of agriculture is that? That's not agriculture. You're growing houses." 38

This time around, the county is including more public outreach, participation and education as a significant part of planning process. It has created the Citizen Advisory Committee (CAC), which is appointed by the County to oversee the comprehensive plan updating process. It is comprised of 25 citizens, including representatives of the Planning Commission and the Board of Supervisors. The CAC plays a vital role in defining community issues, approving meeting formats and agendas, reviewing information, and developing the new plan's goals, objectives and strategies.⁴³ The county has also put approximately 45 citizens

through the Citizen Planning Academy (CPA). The CPA met at my college and went through a workshop where they learned about the tools and techniques of community planning in Virginia over a six week period and discussed local planning issues. In addition, there were six community-wide workshops held at elementary schools where participants were asked to offer their ideas on the county's strengths and weaknesses, as well as their perspectives on the county's quality of life.

The simple desire to preserve the landscape is not enough. It takes active citizen involvement. In the past however, involvement has been low. For one, not all citizens are aware of the public planning meetings where development decisions, such as changes in zoning, are made. I attended one of these public meetings to get an idea of how decisions were made in the process. I sat in the back and watched as a change in zoning that would increase sprawl development was made in less than fifteen minutes. I was amazed by how quickly the change was made. The only residents present were the ones who wanted the change to happen. Part of the reason those opposed to development were not present to object was because the meeting was held at 7:30 p.m. on a weekday. Most residents are exhausted from having worked all day and would rather spend their evenings at home having dinner with their families and recuperating from work than at a planning meeting. Those who are ambivalent about growth do not attend because they do not think that suburban development in a distant part of the county will ever affect them. Grant Massie, the county planner captured the issue well when he asked me,

"If I told you that I was going to paint the outside wall of the dorm two buildings away brown, and that if you had anything to say about it you needed to come to some meeting on Thursday night at 8 o'clock, which happens to be when your study group meets or favorite T.V. show is on, do you care if I paint in brown? Is it really going to impact you?"

[&]quot;Of course not," I replied.

"What if I told that I was going to paint the outside wall of the dorm building right next to you? Would you come to the meeting then?"

"Probably not."

"What about the outside wall of your dorm?"

"No."

"What if I said I was going to paint your neighbors' wall brown? Will it impact you then?"

"Not really."

"Right, because you think it's not really doing anything to you. What if I said that I was going to take a fire axe and punch a big hole in your door? Would you come to the meeting now?"

"I'd have more motivation to go."

I would have more motivation to go the county meetings where zoning decisions are made only when I finally perceived a direct immediate impact on my personal living space.

Unfortunately, once sprawl begins, even if at a distance, it eventually encroaches upon properties and landscapes that at first seemed untouchable, but by the time citizens notice, it is too late to adequately manage it. The final version of the new comprehensive plan should be available by late summer 2006.

Amherst Lessons

Looking at Amherst County has allowed me to understand how the drivers for sprawl work together to create perpetual development. This does not, however, mean that development necessarily has to be in the traditional sprawl form. While yes, Amherst faces the individualism from those who move here and that want to build a new home, and locals who aspire to better jobs, the county is still at the preliminary stages of unmanageable sprawl. If the county takes the initiative *now* to provide for smarter, it *can* more compact growth as it states is one of its comprehensive plan goals. The county can choose to avoid the city of Phoenix's path of

allowing rampant sprawl, and its futile attempt to make up for it afterwards, or the county can choose the city of Portland's path of a more successful anti-sprawl initiative. Amherst, like Portland, has begun involving citizens in their planning process, which is crucial for good sprawl management. In turn citizens need to be more active here, if they are truly concerned about preserving the county's rural landscape. When look at both Phoenix and Portland, it is important to note how local government will reflect the values of the citizens who become active and involved, and that growth will be either uncontrolled or adequately managed, depending on what those citizens desire. The key to keeping Amherst County a rural landscape lies in its ability to reach out to its citizens to a greater extent than it has. At the same time, citizens have to be willing to actively participate in the planning process, and to sacrifice some of the economic benefits of sprawl, just as the residents of Portland did, for the aesthetic pleasure of having an undeveloped landscape. Currently, the only action a citizen of Amherst can take in order to prevent their land from being developed is to put it under conservation easement.

Recommendations for Amherst County

While Amherst County has started being progressive by including citizen participation during the planning process, it needs to take planning decision and citizen participation a step further. The Board of Supervisors, which makes the final decision on county planning, needs to reconsider meeting times for land-use changes and set up a system that requires more overall community input. Their current strategy for citizen input obtains a one-sided input for changes, which can come from only one individual but can eventually affect the entire community. Once overall community input has been received, the Board of Supervisors should consider which input contributes to the comprehensive plan's compact growth goals, and implement changes accordingly. When facing a decision that might counter the county's compact growth goals and

that will be detrimental in the future, the Board of Supervisors should reevaluate their position.

While it is their duty to provide for and respond to citizens needs, it is also their duty to protect citizens, and to plan for a positive future in the long run.

The county should consider changing its traditional approach to zoning to a more progressive approach that allows for some mixed-use zoning. Changing their zoning ordinance to mixed-use would beneficially contribute to the goal of compact development. This change need not happen overnight, but through incremental changes, mixed-use zoning could be one of the most valuable tools the county has to manage sprawl.

Conclusion

The story of sprawl in the U.S. begins in the nineteenth century, and has continued on into the twenty first century. Its began with the help of government policies that were meant to help people in times of need, but also helped fund the construction of key components of suburbia. The fact that growth is considered synonymous to economic prosperity is an indication of how difficult it is to adequately manage growth. Economic prosperity is vital to any place, regardless of what the ideal seems to be. Looking at the current trends in Phoenix and Amherst makes it seem as if nothing is safe from development. Amherst, unlike Phoenix still has a chance to save its landscape. But will it? Will its citizens choose wisely in the future and become active in the planning process? Or will they continue to be passive and allow long-lasting decision to be made that will alter the landscape they enjoy?

The issue is much more complicated than I had previously envisioned, and involves changing a deeply ingrained ideal of "everyone's got to have their acre too." Education alone, however, will not be enough to stop sprawl. As long as it is cheaper to use vehicles for transportation and as long as Americans view it as an expression of freedom, and as long as

buying a home in the suburbs is cheaper than buying a home in city centers, sprawl will not be stopped in Phoenix, or anywhere else in the nation. The answer lies in dramatically altering our own, individual desires and placing the landscape at a higher level of importance than we have in the past. Current growth trends will continue increasing in the meantime, unless citizens decided to rally together and become extremely active in the pursuit of containing sprawl. Even then that might not be enough. What will it take? Will it take something as drastic as running out of oil? Do we as a society have the foresight to break growth patterns before it is too late? I do not know.

Though sprawl can so radically change the most beautiful landscapes, there is hope as more and more individuals become aware of the consequences of sprawl. The existence of tools such as urban growth boundaries and conservation easements show that people are starting to realize that growth needs to more wisely managed. Will there ever be a balance between the value of preserving a landscape and the value of having a good place to live?

I cannot picture Amherst County overrun by suburbs the way Phoenix is. Amherst County is still a place where you can walk around in the woods for a while without seeing another person or hearing the hum of cars in the distance. You are more likely to stumble upon a fallen tree than wander into someone's back yard. Walking through an open field and discovering morning dew on the grass, wading into streams on a Saturday afternoon to distract myself from college life, a thick carpet of fallen leaves that crunches with every careful step, and a chain of tree covered hills off in the distant with enough life to fill my desert home four times over. These are the things I will always remember about Amherst County, and what I hope that local citizens and government choose to preserve.

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